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**Active chromatin and noncoding RNAs: an intimate relationship.**

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**Public Summary:**

Eukaryotic genomes are packaged into chromatin, where diverse histone modifications can demarcate chromatin domains that facilitate or block gene expression. While silent chromatin has been associated with long noncoding RNAs (lncRNAs) for some time, new studies suggest that noncoding RNAs also modulate the active chromatin state. Divergent, antisense, and enhancer-like intergenic noncoding RNAs can either activate or repress gene expression by altering histone H3 lysine 4 methylation. An emerging class of enhancer-like lncRNAs may link chromosome structure to chromatin state and establish active chromatin domains. The confluence of several new technologies promises to rapidly expand this fascinating topic of investigation.

**Scientific Abstract:**

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